

Claims

- [c1] What is claimed is:
1. An interleaved local suspend and reset method for a wireless communications system, the wireless communications system comprising a first station in wireless communications with a second station along at least one channel, the method comprising:
the first station initiating a local suspend function for the channel, a suspend point determined by a first sequence number (SN);
prior to a resume command to terminate the local suspend function, initiating a reset procedure for the channel;
in response to the reset procedure, setting the first SN of the suspend point equal to a default value; and
awaiting the resume command for the channel to terminate the local suspend function.
 - [c2] 2. The method of claim 1 wherein setting the first SN of the suspend point equal to the default value causes the first station to thereafter immediately halt transmission of layer 2 protocol data units (PDUs) to the second station along the channel while the local suspend function for the channel is active.
 - [c3] 3. The method of claim 2 wherein the suspend point comprises a hyper-frame number (HFN) associated with the SN of the suspend point, and in response to the reset procedure, the HFN is set equal to a transmitting HFN of the first station.
 - [c4] 4. The method of claim 1 wherein a prior ciphering configuration for the channel is used before the resume command, and a new ciphering configuration is used for the channel after the resume command.
 - [c5] 5. An interleaved local suspend and reset method for a wireless communications system, the wireless communications system comprising a first station in wireless communications with a second station along at least one channel, the method comprising:
the first station initiating a local suspend function for the channel, a suspend

point determined by a first sequence number (SN) and a first hyper-frame number (HFN) to form a first HFN/SN pair;
prior to a resume command to terminate the local suspend function, initiating a reset procedure for the channel;
after the reset procedure, and prior to terminating the local suspend function, the first station transmitting along the channel to the second station no layer 2 protocol data units (PDUs) having associated HFN/SN pairs that are sequentially after the first HFN/SN pair; and
awaiting the resume command for the channel to terminate the local suspend function.

[c6] 6. The method of claim 5 wherein a prior ciphering configuration for the channel is used before the resume command, and a new ciphering configuration is used for the channel after the resume command.

[c7] 7. The method of claim 5 wherein after the reset procedure, and prior to terminating the local suspend function, the first station transmits along the channel to the second station layer 2 PDUs having associated HFN/SN pairs that are sequentially before the first HFN/SN pair.